4.6 PUBLIC SERVICES AND UTILITIES

Public services include services such as fire protection, police protection, schools, libraries, and parks. Utilities include wastewater, water, solid waste, electricity, gas, telephone, and cable. The purpose of this section is to establish existing conditions for each provider, identify potentially significant impacts, and recommend mitigation measures to reduce the significance of such impacts. The primary question regarding utilities and services, relative to the California Environmental Quality Act (CEQA) process, is whether or not the project has any direct effect on the physical environment through impacts to existing facilities or the requirement to construct new facilities, particularly where such impacts would have an adverse impact on the environment. Impacts would not differ based on whether the proposed facility operates as a stand-alone or co-located facility, and thus all impacts discussed below apply to both scenarios. Information in this section is based on the *City of Huntington Beach General Plan* (City of Huntington Beach 1996)*, City of Huntington Beach General Plan EIR* (City of Huntington Beach 1995), and correspondence from public service and utilities agencies.

EXISTING CONDITIONS

FIRE SERVICE

The City of Huntington Beach Fire Department operates a total of eight fire stations within the City of Huntington Beach (City), including the following:

- Station 1 (Gothard Station), located at 18311 Gothard Street
- Station 2 (Murdy Station), located at 16221 Gothard Street
- Station 3 (Bushard Station), located at 19711 Bushard Street
- Station 4 (Magnolia Station), located at 21441 Magnolia Street
- Station 5 (Lake Station), located at 530 Lake Street
- Station 6 (Edwards Station), located at 18590 Edwards Street
- Station 7 (Warner Station), located at 3831 Skylab Road
- Station 8 (Heil Station), located at 5890 Heil Avenue.

The fire stations serving the project vicinity are Stations 3, 4, and 5. The fire station nearest the project site is Station 4 (Paramedic Engine Company, staff of four), located at 21441 Magnolia Street, approximately 0.5 mile from the subject site. Fire Station 3 (Paramedic Engine Company, staff of four) is located at 19711 Bushard Street, approximately 3 miles from the site. Station 5, situated approximately 2.5 miles from the project site, is composed of a Paramedic Engine Company (staff of four), 95-foot aerial ladder (staff of four), and one ambulance (staff of two emergency medical technicians). The average response times to the project site are 4 minutes from Station 4 and 6 to 7 minutes from Stations 3 and 5. The current Insurance Services Office rating of the site is Insurance Services Office Class I (Maresh, pers. comm. 2010).

POLICE SERVICE

The proposed project site is served by the City of Huntington Beach Police Department, which operates through one central police station and two smaller substations. Facilities and their locations are as follows:

- Police Headquarters, located at 2000 Main Street
- Oakview Center Substation, located at 17483 Beach Boulevard, Suite B
- Downtown Substation, located at 204 Fifth Street.

The Police Headquarters facility, located at 2000 Main Street, serves the entire City population of approximately 200,000 residents spread over 28 square miles (City of Huntington Beach 2010a). Average emergency response time is approximately 6 minutes. The project site vicinity is served by one car/officer per shift, with three shifts per day (Bunetta, pers. comm. 2010). The nearest police facility to the project is the Downtown Substation, situated approximately 2 miles northwest of the subject site.

SCHOOLS

The proposed project site is within the jurisdiction of the Huntington Beach Union High School District and the Huntington Beach City School District. The Huntington Beach Union High School District currently has a total of nine facilities within the cities of Huntington Beach, Westminster, and Fountain Valley. The high school nearest the subject site is Edison High School, located approximately 0.8 mile to the northeast at 21400 Magnolia Street. Edison High School had an actual enrollment of 2,600 students for the fall of 2009 (Cayabyab, pers. comm. 2009).

The Huntington Beach City School District has a total of 12 facilities within the City. Nine facilities are active schools, while three are currently inactive. The elementary school nearest the proposed desalination project site is John H. Eader Elementary School, located at 9291 Banning Avenue. Eader School is situated approximately 1.5 miles from the desalination facility site. Also in the project vicinity is Isaac Sowers Middle School, located approximately 2 miles from the desalination facility site at 9300 Indianapolis Avenue. John H. Eader Elementary has an enrollment of 579 students, and Isaac Sowers Middle has an enrollment of 1,248 students. Kettler Elementary School, which was also approximately 1.5 miles from the proposed desalination facility site, closed in June 2005 (Sauer, pers. comm. 2010).

LIBRARIES

The Huntington Beach Library System consists of five facilities, including the following:

- Huntington Central Library and Cultural Center, located at 7111 Talbert Avenue
- Helen Murphy Branch Library, located at 15882 Graham Street
- Oak View Branch Library, located at 17251 Oak Lane

- Banning Branch Library, located at 9281 Banning Avenue
- Main Street Branch Library, located at 525 Main Street.

The Banning Branch Library serves the project vicinity and is located approximately 2 miles northwest of the subject site. The Banning Branch Library is a small facility and is approximately 2,400 square feet in size (City of Huntington Beach 2010b). This facility holds approximately 27,600 volumes and serves an estimated population of 6,000 people (Blassingame, pers. comm. 2010).

ROADWAY MAINTENANCE

The City of Huntington Beach Public Works Department provides roadway maintenance to the City. The department performs regular maintenance on City-owned roadways in the form of repaving, pothole/curb repairs, and striping, as well as roadway widening, expansion, and improvement. The City of Huntington Beach Public Works Department recently conditioned the widening of both Newland Street (located west of the subject site) and Edison Avenue (situated north of the subject site). The applicant would be required to complete improvements along the southern side of Edison Avenue as a condition of approval for the project, while the City would be responsible for street improvements along Newland Street with the applicant responsible for the landscaping improvements adjacent to their site. For more information, refer to the “IMPACTS” section that follows.

PARKS AND RECREATION

The City contains 70 parks with a total improved area of 594 acres. The City’s park system includes 9 mini-parks totaling 4.5 acres, 48 neighborhood parks totaling 156 acres, 10 community parks totaling 144 acres, and 3 regional parks (Huntington Central Park, Wieder Regional Park, and Blufftop Park) encompassing 290 acres. Other recreational opportunities within the City include two publicly owned golf courses, Huntington Beach City Gym and Pool, Oak View Center, various bikeways, and approximately 2 miles of equestrian trails. The City's coastal recreational facilities include the Huntington Beach Municipal Pier, various beach parks, recreational vehicle camping, and Huntington Harbour (a popular boating area) (Ramos, pers. comm. 2009). The recreational facilities nearest the project site are Edison Community Center, Huntington State Beach, and Huntington City Beach, all of which are located within a radius of approximately 0.5 mile. It should also be noted that the City is planning to coordinate with the County of Orange to examine the feasibility of a landscaped riding/hiking trail along the Huntington Beach Channel, adjacent to the subject site. The proposed location and points of connection for the trail would be refined during the planning process for the trail.

WASTEWATER

The Orange County Sanitation District (OCSD) and the City of Huntington Beach Public Works Department, Utilities Division, provide sanitation collection services for the City. Presently, 98% of the City is connected to the sewer system while the remainder uses septic tanks. The two wastewater treatment plants serving the City, Plant 1 and Plant 2, perform primary and secondary treatment procedures and are operated by the OCSD. OCSD Plant 2 would likely serve the proposed project. Within the City, the wastewater system is composed of major trunk lines, smaller feeder lines, and lift stations. The OCSD has developed engineering plans for plant improvements

anticipated to meet the needs of the City to the year 2050 (City of Huntington Beach 1996, Utilities Element).

The nearest City sewer line is an 8-inch line located north of the project site running along the southern side of the Huntington Beach Channel operated by the Orange County Flood Control District (OCFCD) in an east–west direction (Smith, pers. comm. 2009). However, connection to this line for providing sewer service to the project will be prohibited. Per conditions of approval, an 8-inch diameter sewer line will be constructed in Edison Avenue and will be extended westerly to the intersection of Edison Avenue/Newland Street. The sewer will then be connected to a 48-inch OCSD trunk line along Newland Street. A 48-inch OCSD trunk line exists west of and adjacent to Newland Street, an 84-inch line exists within Pacific Coast Highway, and a 78-inch line is situated within Magnolia Street (Smith, pers. comm. 2009). An additional private sewage system is located on the Huntington Beach Generating Station (HBGS) property, which flows by gravity to an on-site sewage ejector station and is conveyed to OCSD for treatment.

STORMWATER DRAINAGE

The OCFCD and the City of Huntington Beach Public Works Department operate the stormwater drainage system within the City. The storm drainage system removes water runoff from streets and transports the runoff to the ocean. The OCFCD owns, operates, maintains, and improves regional flood control facilities. The City owns and operates 15 storm drainage channel pumping stations, which pump the runoff water into the channels and to the ocean. No runoff from the project site is currently conveyed to the Pacific Ocean via City storm drainage facilities, as only OCFCD facilities provide service to the subject site. The closest storm channel near the project site is the OCFCD Huntington Beach channel (DO1), located adjacent to the site to the north and east. The Huntington Beach Channel confluences with the Talbert Channel (DO2) downstream and eventually flows into the Pacific Ocean. The OCFCD maintains the Huntington Beach Channel to provide 100-year regional flood protection. Work performed on the Huntington Beach Channel by OCFCD would be related to operations and maintenance (Jones, pers. comm. 2009). As noted in Section 4.3, the HBGS on-site stormwater system and the City's local stormwater system both convey stormwater to the Pacific Ocean via the HBGS outfall.

In March 2010, the OCFCD, in coordination with the Huntington Beach Wetlands Conservancy, removed a portion of the Huntington Beach Channel levee to restore Magnolia Marsh, located between Magnolia Street and the AES Power Generation Station (Jones, pers. comm. 2010).

WATER

The Huntington Beach Public Works Department currently produces approximately 35,000 acre-feet of potable water per year (afy), an average daily production of 48 cubic feet per second (cfs), and a maximum daily peak of 50 million gallons per day (mgd). Currently, 62% of the City's water is supplied by groundwater wells located within the City, while 38% is imported from the Metropolitan Water District of Southern California (MWD). Facilities within the City consist of 480 miles of water lines (ranging from 2 inches to 42 inches in diameter), water booster pumps, and four reservoirs with a combined capacity of 55 million gallons (City of Huntington Beach 1996, Utilities Element).

Distribution piping in the area consists of looped 12-inch-diameter asbestos cement (AC) pipe within Hamilton Avenue, Magnolia Street, and Newland Street. Pipelines within Pacific Coast Highway consist of 10-inch and 12-inch AC pipe. As part of a service agreement, HBGS recently

completed a major modification, which includes distributing 10- and 12-inch piping around the entire HBGS property and the proposed project, as well as relocating its meter service from Pacific Coast Highway to Newland Street.

GROUNDWATER RECHARGE

The OCSD produces secondary treated water for the OCWD, where the water is further treated and used for groundwater recharge, or distributed for industrial use and landscape irrigation for the cities of Fountain Valley, Santa Ana, Costa Mesa, and Newport Beach. Through the Groundwater Replenishment System (GWRS) developed by OCSD and OCWD, groundwater supplies for the City are partially recharged using reclaimed water. It is not anticipated that the proposed desalination project would require the use of reclaimed water.

SOLID WASTE

In 1989, the California Legislature enacted the California Integrated Waste Management Act (Assembly Bill (AB) 939). AB 939 was passed with the goal of decreasing the waste stream in order to save decreasing landfill space. AB 939 mandated a 50% reduction of waste being disposed of in the landfill system by the year 2000. Under the authority of AB 939 the Department of Resources Recycling and Recovery (CalRecycle, formerly the California Integrated Waste Management Board) requires that each county have sufficient solid waste disposal capacity for at least 15 years, and that each county prepare, submit, and periodically update a Countywide Integrated Waste Management Plan (CIWMP) to demonstrate how each county plans to meet state mandated waste reduction requirements. Recent legislation changed how local jurisdictions measure their diversion rates to meet the 50% reduction in solid waste going to landfills. The new law, Senate Bill (SB) 1016, established a 50% per capita reduction target that is approximately equivalent to the previous 50% diversion requirement and is based on historic waste generation information from years 2003 through 2007 (OCIWMD 2010).

Orange County Waste and Recycling is responsible for the administration and management of Orange County's solid waste disposal system, which includes developing and implementing the CIWMP. The CIWMP consists of many documents pulled together from each city in the County and the County unincorporated area. These documents include Siting Elements, Source Reduction and Recycling Elements, Nondisposal Facility Elements, and Household Hazardous Waste Elements for each city or County unincorporated area. The latest CIWMB data indicates that all Orange County cities met their 50% equivalent diversion targets in 2007 and 2008 (OCIWMD 2010).

Orange County Waste and Recycling also prepares the Regional Landfill Options for Orange County (RELOOC), a long-range municipal solid waste strategic planning document. The RELOOC, which was last updated in 2007, demonstrates that the County's municipal solid waste is safely disposed of and that future disposal needs are met over the next 40 year planning period (exceeding the 15-year statutory requirement) (OCIWMD 2010).

The County of Orange owns and operates three active landfills that are listed below in Table 4.6-1, Permitted Capacities of Orange County Solid Waste Landfills.

TABLE 4.6-1
PERMITTED CAPACITIES OF ORANGE COUNTY SOLID WASTE LANDFILLS

LANDFILL	MAXIMUM CAPACITY (CUBIC YARDS)	CURRENT REMAINING CAPACITY (CUBIC YARDS)	MAXIMUM PERMITED DAILY LOAD (TONS)	2007 ANNUAL DISPOSAL (TONS)	ESTIMATED CLOSURE DATE
Frank R. Bowerman Landfill, 11002 Bee Canyon Access Road, Irvine, CA 92602	127,000,000	59,411,872	8,500	2,056,731	2053*
Olinda Alpha Landfill, 1942 North Valencia Avenue, Brea, CA 92823	74,900,000	38,578,383	8,000	1,869,330	2021**
Prima Deshecha Landfill, 32250 La Pata Avenue, San Juan Capistrano, CA 92675	172,900,000	87,384,799	4,000	581,790	2067
Total Countywide	374,800,000	185,375,054	20,500	4,507,851	—

Notes:
* Per the 2007 RELOOC, Short-term Strategy Number 2, the County is planning to expand the Bowerrman Landfill Capacity and extend its closure date from 2022 to 2053.
** Per the 2007 RELOOC, Short-term Strategy Number 3, the County is planning to expand the Olinda Alpha Landfill Capacity and extend its closure date from 2013 to 2021.
Source: CalRecycle 2010.

As shown in the table, the County's three active solid waste landfills have a total maximum permitted daily capacity of 20,500 tons and a total remaining capacity of over 185,000,000 cubic yards. In 2007 approximately 4.5 million tons of municipal solid waste were disposed of in Orange County.

In the City, a total of 194,928 tons of solid waste were sent to local landfills in 2008 (CalRecycle 2010). As shown in Table 4.6-2, City of Huntington Beach Diversion Rates for 2007 and 2008, the City met and exceeded its target diversion rate under SB 1016 of 10.4 pounds per person per day by 4.9 and 5.1 pounds per person per day in 2007 and 2008 respectively, the 2 years that data exists.

TABLE 4.6-2
City of Huntington Beach Diversion Rates for 2007 and 2008

YEAR	TARGET DIVERSION RATE (LBS/PERSON/DAY)	ANNUAL DIVERSION RATE (LBS/PERSON/DAY)	POUNDS EXCEEDED (LBS/PERSON/DAY)
2007	10.4	5.5	4.9
2008	10.4	5.3	5.1

Source: OCIWMD 2010.

The City has a franchise agreement with Rainbow Disposal to collect municipal solid waste, sort out all recyclable materials at Materials Recovery Facilities, and then dispose of the residual waste at the local landfill. Under City of Huntington Beach Municipal Code Title 8, Chapter 8.21 Refuse Management, the collection of refuse, recyclable waste material, and yard waste shall be performed exclusively by the City Refuse Collector, currently Rainbow Disposal. The City's municipal code defines "refuse" as "all putrescible and non-putrescible solid and semisolid wastes, including

garbage, trash, refuse, paper, ashes, industrial wastes, demolition and construction wastes, discarded home and industrial appliances, manure, vegetable or animal solid or semi-solid wastes, and other discarded solid or semi-solid wastes, but not including Hazardous Waste, radioactive waste regulated pursuant to the State Radiation Control Law, untreated medical waste regulated pursuant to the State medical Waste management Act, and liquid waste." Rainbow Disposal sends all refuse through its primary Materials Recovery Facility, which is permitted for 4,000 tons per day (Gordon, pers. comm. 2010). The City's Municipal Code requires that solid waste be stored in specified containers and in such a manner as to not provide harborage to rats or cause a fire hazard (City of Huntington Beach Municipal Code, Chapter 8.21.080).

The Frank R. Bowerman Landfill is the landfill that is primarily used in the disposal of municipal solid waste from the project area, with exceptions on days when the Frank R. Bowerman Landfill reaches its daily tonnage limit or there is an emergency (Gordon, pers. comm. 2009). In such cases the County redirects the waste to another landfill, such as the Alpha Olinda Landfill (Gordon, pers. comm. 2009).

It is anticipated that hauling solid waste from the site would generate an average of one to two truck trips per day. Waste disposal vehicles would access the site via Newland Street. As discussed in Section 4.9, Construction-Related Impacts, Newland Street has a street capacity of 20,000, as identified in the City of Huntington Beach General Plan Circulation Element. Also, a portion of Newland Street near the project site is a designated truck route, according to the General Plan. Therefore, surrounding uses along Newland Street would not notice an increase in traffic noise from trips due to the existing high volume of traffic and trucks traveling along Newland Street. Also, all waste hauling trips would take place during allowable daytime hours (7:00 a.m. to 8:00 p.m.). Therefore, impacts would be less than significant.

ELECTRICITY

The Southern California Edison (SCE) Company currently provides electrical service to the City. Major facilities owned by SCE within the City include six substations, various transmission lines, and switchyards (AES currently owns and operates a power plant within the City, located along Pacific Coast Highway west of Magnolia Street, adjacent to the project site). These facilities comprise a component of the California power grid (grid). The grid is a network of long-distance, high-voltage transmission lines and substations that carry electricity to local utilities, such as SCE, for distribution to their customers. The California Independent System Operator (ISO) is a non-profit public benefit corporation that is responsible for ensuring reliability of electrical supply and distribution through the grid, which covers approximately 75% of the state, and includes over 25,526 circuit miles of transmission facilities, with an annual volume of approximately 200 billion kilowatt hours, serving approximately 30 million California residents (CalISO 2010). Currently, SCE service meets the City's demands for electricity (City of Huntington Beach 1996, Utilities Element).

GAS

The City receives natural gas service from the Gas Company, a Sempra Energy Utility. The Gas Company receives natural gas from Southern California, Northern California, and out-of-state suppliers.

The Gas Company facilities within the project vicinity include a 16-inch, high-pressure pipeline along Newland Street (located west of the project site) and 3-inch, medium-pressure pipelines

along Edison Avenue and Hamilton Avenue (located north of the project site) (Heintz, pers. comm. 2009). The Gas Company has no immediate plans to update the existing equipment or to implement new technologies aside from the routine maintenance checks and replacements of deteriorating supply lines.

TELEPHONE AND CABLE SERVICE

Verizon provides telephone service and Time Warner provides cable service within the project vicinity. According to data provided by Verizon, telephone facilities in the project vicinity include aboveground lines located along Edison Avenue (located north of the project site) and within HBGS property (located south of the project site), and underground lines along Newland Street (located west of the project site) (Leckie, pers. comm. 2009). Existing Time Warner cable facilities within the project vicinity are located underground along Newland Street (Jankowski, pers. comm. 2009). There are no existing Time Warner facilities within the proposed project boundaries (Jankowski, pers. comm. 2009).

IMPACTS

SIGNIFICANCE CRITERIA

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) contains the Initial Study Environmental Checklist form used during preparation of an Initial Study. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a significant impact to public services would occur if the project would result in:

- Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:
    - Fire protection
    - Police protection
    - Schools
    - Parks
    - Other public facilities
- An increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the park would occur or be accelerated
- The inclusion of recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment

- An exceedance of wastewater treatment requirements of the applicable Regional Water Quality Control Board

- The construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects

- The construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects

- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed

- A determination by the wastewater treatment provider which serves or may serve the project that it has in-adequate capacity to serve the project's projected demand in addition to the provider's existing commitments

- A determination that local landfills have in-sufficient permitted capacity to accommodate the project's solid waste disposal needs

- Non-compliance with federal, state, and local statues and regulations related to solid waste

- Require or result in the construction of new electrical generation and/or transmission facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects.

Fire Service

The project would comply with City of Huntington Beach Fire Department requirements, including the installation of fire sprinklers and fire hydrants. It is not anticipated that project implementation would result in the need for additional Fire Department facilities. The proposed project is not of the scope or nature to create a significant increase in demand for services requiring physical additions to the City of Huntington Beach Fire Department (Maresh, pers. comm. 2010). In addition, the City of Huntington Beach Fire Department, through mutual aid and automatic aid agreements with Orange County and the cities of Westminster, Santa Ana, Newport Beach, Fountain Valley, and Costa Mesa, can provide additional staff as needed. Adequate emergency access would be provided in accordance with City and County requirements. Impacts are not anticipated to be significant.

Police Service

The proposed project would be within the service area of the Huntington Beach Police Department. The desalination facility will operate 24 hours per day with security and/or employees always on the site monitoring activities. The proposed facility is not anticipated to create a significant increase in service calls to the project vicinity, nor is it expected to create a need for additional police facilities within the City. No impacts are anticipated in this regard (Donnelly, pers. comm. 2009).

Schools

The proposed project involves the implementation of a seawater desalination facility within the southeastern portion of the City. The project does not propose housing or other student-generating uses. According to the Huntington Beach Union High School District, the project is anticipated to have negligible impacts on school facilities within the City, and is anticipated to have a student generation rate of .0000340242 per square foot. However, in consideration of AB 2926, the applicant would be required to pay a commercial fee of $0.47 per square foot for non-residential development within the Huntington Beach Union High School District, of which the High School District would receive 39%, or $0.1833 per square foot of the total fee (Cayabyab, pers. comm. 2009). The Huntington Beach City School District would receive the remaining 61% ($0.2867 per square foot) of the commercial fee, and it does not anticipate that the proposed project would have significant student-generating impacts or require other assessment fees or mitigation measures. The project is not expected to generate the need for additional school facilities (Sauer, pers. comm. 2010). Therefore the payment of these fees at the time of building permit issuance would offset potential impacts to the construction or expansion of new school facilities. It should be noted that the Huntington Beach City School District is concerned that the proposed project may impact the health of its students that participate on the Dwyer and Sowers Middle School surf teams (Sauer, pers. comm. 2010). These concerns are addressed in Section 4.10, Ocean Water Quality and Marine Biological Resources. No significant impacts are anticipated in this regard.

Libraries

The proposed desalination project is not anticipated to have significant impacts on the City's library system. Although the nearest library facility to the project site (the Banning Branch Library) is small in size (approximately 2,400 square feet) the project is anticipated to have a negligible impact on the branch. The applicant would be required to pay standard library enrichment fees concurrent with building permit issuance consistent with Chapter 17.66 of the City's Municipal Code (Library Development Fee). The Library Department has two development fees that are due at the time the building permit is issued for industrial construction projects. These fees are the Library Development Fee, which is $0.44 per square foot, and the Community Enrichment Library Fee, which is $0.15 per square foot (Blassingame, pers. comm. 2010).

Roadway Maintenance

Landscaping and street improvements along Edison Avenue and Newland Street, as well as landscaping improvements along the eastern site boundary, are included in the project and will be installed pursuant to Code requirements from the City of Huntington Beach Department of Public Works. The landscaping and street improvements are subject to Design Review Board review and approval and may change based on the Board's review. Along the northern portion of the project site, Edison Avenue would be improved. These improvements would consist of the dedication of 12 feet along the frontage of the existing Edison Avenue (for curb, gutter, paving, turn-about, and street lighting improvements) for a total of approximately 600 linear feet. It should be noted that AES Huntington Beach, LLC, or property owner would be responsible for dedication of property to the City for these improvements. However, the project applicant would be responsible for completing the roadway and landscaping improvements along the project's frontage as a condition of approval for the project subsequent to property dedication. The project applicant would be responsible for completing these roadway and landscaping improvements as a condition of approval for the project subsequent to property dedication. In addition, traffic impact fees as

determined by the City would be collected upon project implementation in order to offset any costs incurred for roadway widenings and intersection capacity improvements. Impacts would be less than significant.

Parks and Recreation

The recreational facilities nearest the project site are Edison Community Center, Huntington State Beach, and Huntington City Beach, all of which are located within a radius of approximately 0.5 mile. The proposed desalination facility would be situated in an industrial area and would employ approximately 18 people, with 5 to 7 people on duty during regular working hours Monday through Friday, and a minimum of 2 people on duty during swing shifts, graveyard shifts, and weekends. The project is anticipated to have a negligible impact on parks and recreation facilities within the City and will be required to pay development impact fees prior to issuance of grading permits. The project applicant will be required to demonstrate compliance with City parkland requirements identified in Chapter 254.08 (or Ordinance No. 3596) of the City of Huntington Beach Zoning and Subdivision Ordinance. Impacts in this regard are not expected to be significant.

Wastewater

Per conditions of approval, anew 8-inch diameter sewer line will be constructed in Edison Avenue and will be extended westerly to the intersection of Edison Avenue/Newland Street. The sewer will then be connected to a 48-inch OCSD trunk line along Newland Street to provide wastewater services. All work within, over, and under the OCFCD and County of Orange right-of-way will not commence until encroachment permits for the proposed work have been obtained from the County. The City of Huntington Beach Municipal Code, Chapter 14.25, contains regulations associated with stormwater and urban runoff management. Permits are required for any alterations or connections to the existing sewage system and for industrial waste dischargers. The proposed project would produce nominal amounts of domestic wastewater, as the facility would employ approximately 18 people, with 5 to 7 on site during weekdays and a minimum of 2 employees on site during swing shifts, graveyard shifts, and weekends. However, desalination facility operation would require that used reverse osmosis (RO) membrane cleaning first-rinse solution is discharged into the local sanitary sewer for treatment at the OCSD regional wastewater treatment plant or the existing private sewer system on AES property. Approximately 91,000 gallons of used cleaning solution would be generated per month.

The “first rinse“ treated waste cleaning solution from the washwater tank will be discharged into the local sanitary sewer for further treatment at the OCSD regional wastewater treatment facility. The OCSD would impose a commercial/industrial capital facility fee that is collected by the City and which the City retains 5% for collection purposes. This capital facility fee would offset any impact to the City and OCSD and would be used to provide system improvements as necessary.

As stated in Section 3.0, Project Description, the accumulation of silts or scale on the RO membranes would require periodic cleaning to remove these foulants and extend membrane life. Normal cleaning frequency is twice per year. To clean the membranes, a chemical cleaning solution is circulated through the membranes. The reverse osmosis system trains would be cleaned using a combination of cleaning chemicals such as industrial soaps (e.g., sodium dodecylbenzene, which is frequently used in commercially available soaps and toothpaste) and weak solutions of acids and sodium hydroxide (refer to Table 4.10-7, Reverse Osmosis Membrane Solution Discharge Volumes*).* Chemicals typically used for cleaning include the following:

- Citric Acid – (2% solution)
- Sodium Hydroxide B – (0.1% solution)
- Sodium Tripolyphosphate B – (2% solution)
- Sodium Dodecylbenzene B – (0.25% solution)
- Sulfuric Acid B – (0.1% solution).

A portion of the waste cleaning solution from the washwater tank is proposed to be discharged into the local sanitary sewer for further treatment at the OCSD regional wastewater treatment facility. The project will require a Sewer Connection Permit from the City and an Industrial Source Control Permit from the OCSD. Monitoring of waste cleaning solution water quality would be performed per the requirements of the OCSD for wastewater discharges to the sanitary sewer. The cleaning rinse water following the "first rinse" would be mixed with the RO facility concentrated seawater, treated waste filter backwash, the dilution water, and then sent to the ocean. This "second-rinse" water stream would contain trace amounts of cleaning compounds and would be below detection limits for hazardous waste. Cleaning of the RO system would be staggered so that on average, two RO trains would be cleaned per month after the first year or so of operation, resulting in approximately 91,000 gallons of used cleaning solution generated per month. Impacts on local wastewater facilities are not anticipated to be significant.

Stormwater Drainage

No City storm drainage facilities exist within the project vicinity. It is anticipated that the majority of the subject site would be composed of impervious surfaces, thereby increasing the potential amount of surface runoff. However, an on-site local stormwater drainage system would be implemented as part of the desalination facility site. The desalination facility area and aboveground product water storage tank area would feature catch basins and stormwater pump stations to provide adequate drainage. Stormwater flows would first be directed to catch basins by gravity, and would then be directed to a stormwater pump via gravity lines. Stormwater shall be tested for pollutants and treated using one of two sedimentation methods. The water would then be pumped to the 72-inch by-product concentrated seawater discharge line that ultimately connects to the HBGS outfall line. As alternative options, the desalination facility's on-site stormwater system could discharge stormwater to the HBGS on-site stormwater system or the City's local stormwater system. The HBGS on-site stormwater system conveys stormwater to the Pacific Ocean via the HBGS outfall. The City's stormwater system conveys stormwater to the Pacific Ocean via existing facilities operated by the City and OCFCD. No stormwater would be discharged into the adjacent Huntington Beach Channel. A Water Quality Management Plan (WQMP) would be prepared for the proposed project as required by the Santa Ana Regional Water Quality Control Board (SARWQCB) and by the City.

Stormwater would be treated prior to off-site discharge in order to minimize impacts from urban pollutants. One of two sedimentation methods would be utilized for treatment, including the following:

- **Waste Filter Backwash Clarifiers:** The proposed desalination facility would utilize clarifiers for the purpose of settling the waste stream generated during the backwash of the pretreatment filters. During rainy events, stormwater would be combined with the waste filter backwash water and settled in the filter backwash clarifiers. This clarified water would then be combined with the desalination facility's concentrated seawater discharge and sent to the Pacific Ocean via the AES outfall. The waste filter backwash clarifiers would be oversized to accommodate the treatment of stormwater.

- **Sedimentation in Separate Clarifiers:** As an alternative to combining on-site stormwater with the waste filter backwash, stormwater directed to on-site storm drains could be treated in separate sedimentation clarifiers for stormwater treatment only. Subsequent to clarification, this water would be discharged via the AES outfall with the desalination facility concentrated seawater discharge and AES cooling water.

The most viable stormwater treatment alternative would be selected during the design phase of the project, in close coordination with the City, SARWQCB, and HBGS staff. The stormwater facilities would be designed to comply with all applicable requirements of the City and the SARWQCB. As a result of the proposed project, impacts are not anticipated to be significant.

Water

Implementation of the proposed project would require new facilities to support operational uses (e.g., pipeline extensions, drinking fountains, and restrooms), although these are not anticipated to create significant impacts. It is anticipated that normal domestic demand created by the proposed project can be provided with desalinated water generated on site. However, should the project require potable water from the City, adequate backflow protection devices would be installed and maintained to ensure that no mixing of potable and subpotable water would occur. The project applicant will be required to pay appropriate fees for water service connections, installation, and meters in the event they are required. In addition, the City requires payment of a service fee for industrial customers.

For discussions on the proposed project's relationship to existing and projected water supplies, see Sections 3.5, Project Need and Objectives, and 4.11, Product Water Supply.

Solid Waste

The primary sources of solid waste from the project would consist of sludge generated as a result of the intake water pretreatment filtration and disposal of other wastes, such as filter cartridges. Sludge disposal would involve dewatering on site to a sludge concentration of 20% or higher and disposal in a sanitary landfill. A daily average of 6.5 wet tons of sludge would be transported for landfill disposal and disposed as a municipal waste. Sludge from a seawater desalination facility consists of the suspended solids derived from the raw seawater, the ferric-based solids derived from the coagulation process, and low concentrations of treatment polymers. Sludge of this composition is not hazardous. Spent filter cartridges would comprise approximately 23 tons (3800 cartridges x 2 lbs/cartridge x 6 times or replacement /yr)/2,000 lbs/ton) of waste per year. Spent RO membrane elements would comprise approximately 20 tons (19,000 membrane elements x 15 lbs/membrane x 0.143 replacement /yr)/2,000 lbs/ton) of waste per year. Combined the sludge, spent filter cartridges, and spent RO membranes would equal approximately 2,425 tons of solid waste generated by the desalination process per year. In addition, the office facilities on the site are

expected to generate nominal amounts of office waste. All of these waste products qualify as refuse under the City of Huntington Beach's municipal code. Rainbow Disposal, the City's franchise municipal solid waste hauler, would service the project (Jubinsky, pers. comm. 2010).

The project applicant will comply with all applicable federal, state and local statutes and regulations related to solid waste handling, transport, and disposal. Therefore, no impact would occur relating to solid waste handing laws and regulations.

The proposed project would produce approximately 2,500 tons of solid waste per year, which is approximately 0.06% of the solid waste sent to Orange County landfills in 2007. Orange County landfills have a combined remaining capacity of over 185,000,000 cubic yards, and therefore have sufficient permitted capacity to accommodate the project's solid waste disposal needs. The generation of waste at the facility is not anticipated to affect landfill capacity or require expansion of facilities, due to the relatively small quantities. Therefore, impacts on solid waste facilities are not anticipated to be significant.

Electricity

The proposed project would consist of a seawater intake system, pretreatment facilities, a seawater desalination facility utilizing RO technology, post-treatment facilities, a membrane cleaning system, chemical feed equipment, service facilities (e.g., heating, ventilation, and air conditioning (HVAC) and lighting), and on- and off-site booster pump stations. All of this equipment will utilize electric power. Under both the co-located and the stand-alone scenarios, based upon power consumption of 15 kilowatt hours per thousand gallons (5,136 kilowatt hours per acre-foot), the proposed 50 mgd (56,000 afy) desalination facility would require approximately 30 to 35 megawatts per hour to produce and distribute potable water. As such, the daily energy consumption of the facility is estimated to be between 793 to 840 megawatt hours per day (baseline design for the primary pipeline route, co-located, and stand-alone, respectively), and the total annual power use is estimated to be between approximately 289,715 MHh/yr and MWh/yr 306,680 for the co-located scenario and the stand-alone scenario respectively.

The proposed desalination facility's electrical power source would be controlled by a power marketing company, which, in consultation with the California Independent System Operator (Cal ISO), would obtain power from the HBGS and/or the California power market at the lowest cost possible. As such, a variety of base-, intermediate- and peak-load power-generating facilities may produce power for the desalination facility. The facility's planned 49,481-square-foot product water storage tank on site will have a capacity of 10 million gallons of water and will enable the facility to utilize off-peak power to the maximum extent practicable and reduce or halt potable water production during times of peak electricity demand.

The desalination facility would not include a backup generator. Emergency backup power would come from the electrical power grid and/or HBGS auxiliary reserve bank. Back-up power for the off-site underground booster pump stations would be provided by underground generator sets using diesel fuel. Maximum emissions from the back-up off-site generators are limited to 500 hours of operation.

The proposed project's introduction of a new, local source of water into Orange County will result in a net reduction in energy demand that is currently associated with imported water supplies. The project will supply 56,000 afy to Orange County, providing a direct, one-to-one replacement of

imported water to meet the requirements of the participating water agencies, and thus eliminating the need to pump 56,000 acre-feet of water into the region. 3.13 MWh of electricity is required to pump 1 acre-foot of State Water Project (SWP) water to the customer. Because the project will avoid the use of 56,000 afy of imported water to Orange County, once in operation, the project will also avoid 175,500 MWh/yr of electricity consumption otherwise required to deliver that water to Orange County. Under the co-located scenario the project requires 289,715MWh/yr, which results in the net increase in total annual electricity consumption of the proposed project of 114,215 MWh/yr. Under the stand-alone scenario the project would require 306,680 MWh/yr, resulting in a net increase in annual electricity consumption of 131,180 MWh/yr.

Electric power-generating plant's are distributed throughout the state, and the project's electrical demand would be met by dozens of power plant's connected to a regional power supply source, with many of those plants located outside of Southern California. The project includes an electrical substation facility. This 30–35 megavolt-amperes (MVA) (66 kV) substation would be serviced from an existing SCE 66 kilovolt (kV) system. The substation would be located on site, immediately west of the pretreatment filter structure and north of the administration building. The substation will include two transformers onsite to covert 66 kV to 12 kV, an electrical equipment room that will include switches, relay equipment, a remote terminal unit, battery and AC and DC distribution panels. The substation will be enclosed by a minimum of an 8-foot high perimeter chain-link fence. The substation would be served by constructing a tie-line (anticipated to be approximately 500 feet in length) between the existing Huntington Beach 66 kV line or the Huntington Beach Wave 66 kV line and a dead-end structure inside the substation. As stated in Appendix G, Report on Local and Regional Power Requirements and Generation Resources, the 35 MW project load would approximately equate to less than 1% of demand within Orange County or Southern California (Navigant Consulting, Inc. 2004). It is not anticipated that the increase in energy demand and consumption would require expansion of or improvements to existing facilities within the ISO-controlled electricity grid that could result in significant environmental effects. Therefore, impacts to energy resources and facilities would be less than significant (also refer to Section 4.4, Air Quality).

Gas

The Southern California Gas Company can provide gas service to the proposed project via numerous gas mains surrounding the subject site (Heintz, pers. comm. 2009). Project implementation would not result in any construction-related impacts to the service area. No impacts are anticipated in this regard.

Telephone and Cable

Verizon provides telephone service and Time Warner provides cable service within the project vicinity. Verizon has telephone facilities located underground along Newland Street (located west of the project site), aboveground along Edison Avenue (located north of the project site), and aboveground within HBGS property (located south of the project site). Verizon would be available to provide telephone service to the subject site from existing facilities (Leckie, pers. comm. 2009). Cable television access to the City is provided by Time Warner Communications via underground cable along Newland Street. Neither Verizon nor Time Warner anticipate long-term impacts to telephone or cable facilities as a result of project implementation. However, short-term impacts to telephone and cable facilities may occur if underground utility lines along Newland Street are interrupted or relocated during construction (Jankowski, pers. comm. 2009). Proper planning during

construction would reduce the likelihood of impacts to these facilities (Leckie, pers. comm. 2009). Impacts would be less than significant.

It should also be noted that the installation of the 48- to 54-inch product water delivery pipeline within an existing street ROW would consume underground space for utilities along the streets the pipeline is proposed to occupy. However, it is anticipated that the project's water delivery pipeline would be installed either bellow existing cable and telephone conduit, or would be installed deep enough to allow for the installation of utilities (telephone, cable television, electricity, small diameter pipes) crossing above.

SUMMARY OF IMPACTS

Although no impacts related to public services and utilities have been identified, mitigation measures are proposed to ensure adequate solid waste service.

MITIGATION MEASURES

FIRE SERVICE

None required.

POLICE SERVICE

None required.

SCHOOLS

None required.

LIBRARIES

None required.

ROADWAY MAINTENANCE

None required.

PARKS AND RECREATION

None required.

WASTEWATER

None required.

DRAINAGE

Refer to Section 4.3, Hydrology and Water Quality.

WATER

None required.

RECLAIMED WATER

None required.

SOLID WASTE

PSU-1 The applicant shall coordinate with the City of Huntington Beach's recycling representative to ensure that the proposed project is in compliance with the City's waste reduction and recycling program.

PSU-2 Prior to the issuance of a grading permit, the applicant shall prepare a waste reduction plan for the generation of construction and operational waste from the proposed project. This plan will be submitted to the recycling coordinator from the City of Huntington Beach, who will ensure that AB 939 requirements are properly addressed.

ELECTRICITY

None required.

GAS

None required.

TELEPHONE AND CABLE SERVICE

None required.

UNAVOIDABLE SIGNIFICANT IMPACTS

None have been identified.

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